Objective: To report a case of trichorhinophalangeal syndrome coexistent with common variable immunodeficiency (CVID)-like phenotype with a polyclonal expansion of CD8 T-cells

Case: A 34-year-old white woman with multiple congenital abnormalities, autoimmune endocrinopathies, and chronic neutropenia with splenomegaly presented with daily low-grade fever. Laboratory examination showed pancytopenia and persistent neutropenia now unresponsive to G-CSF. A bone marrow biopsy revealed 95% cellularity, myelofibrosis, increased histiocytes and eosinophils, and extensive lymphoid infiltration all interpreted to represent a T-cell proliferative disease, possibly malignant or as secondary to either long-term G-CSF treatment or CVID. To better understand her problems, her full history was reviewed, the literature was searched, and a T-cell receptor gene rearrangement analysis was performed.

Discussion: CVID is clinically diverse: several potential genetic and immunopathogenic mechanisms may account for these heterogeneous and poorly defined clinical phenotypes. Polyclonal expansion of large granular lymphocytes with neutropenia has been reported in a substantial proportion of CVID patients and is associated with elevated levels of soluble Fas ligand. Molecular genetic analysis of the marrow showed that the T cells were polyclonal, ruling out malignancy. Although this patient’s congenital abnormalities are likely unrelated, we hypothesize at least some of her endocrinopathies and all of her hematologic abnormalities are a manifestation of immunodysregulation due to CVID. This stresses the need to more precisely define distinct clinical phenotypes and to develop guidelines for diagnosis and treatment of a very heterogeneous syndrome, CVID.
